

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. Fused ceramic grains having the following average chemical composition by weight, in percentages by weight on the basis of the oxides:

 Al_2O_3 : 93% to 98.5%;
 MgO: 2.2 to 6.5%;
 SiO_2 : < 0.1%;
 other impurities: < 0.4%.
2. Grains according to claim 1, wherein the minimum MgO content, as a percentage by weight on the basis of the oxides, is 2.3%.
3. Grains according to claim 1, wherein the minimum MgO content, as a percentage by weight on the basis of the oxides, is 2.45%.
4. Grains according to claim 1, wherein the maximum MgO content, as a percentage by weight on the basis of the oxides, is 4%.
5. Grains according to claim 1, wherein the maximum MgO content, as a percentage by weight on the basis of the oxides, is 2.5%.
6. Grains according to claim 1, wherein the maximum carbon content is 250 ppm.
7. Grains according to claim 1, wherein the maximum carbon content is 200 ppm.

8. Grains according to claim 1, wherein the maximum Na_2O content, as a percentage by weight on the basis of the oxides, is 0.1%, preferably 0.05%.
9. Grains according to claim 1, which consist of corundum crystals surrounded by a nonstoichiometric $\text{MgO-Al}_2\text{O}_3$ spinel phase.
10. Grains according to claim 9, wherein the mean size of said corundum crystals is between 18 and 20 μm
11. Grains according to claim 9, wherein 90% of said corundum crystals have a size of greater than 9 μm and/or 90% have a size of less than 27 μm .
12. Grains according to claim 9, wherein 100% of said corundum crystals have a size of greater than 5 μm .
13. Process for manufacturing ceramic grains, which comprises the following successive steps:
 - a) preparation of a mixture of raw materials having the following average chemical composition by weight, as percentages by weight on the basis of the oxides:
 - Al_2O_3 : 93% to 97.5%;
 - MgO : 2.2 to 6.5%;
 - SiO_2 : < 0.1%;
 - other impurities: < 0.4%;
 - b) fusion, in an electric arc furnace, by means of a short arc and with a melting energy before casting between 2000 and 2500 kWh per ton of said mixture of raw materials, under defined reducing conditions so that the product obtained after the following step c) has a maximum carbon content of 250 ppm;
 - c) casting and quench cooling;

d) grinding of the cooled product.

14. Process according to claim 13, wherein said mixture of raw materials also contains between 0.8 to 5.5 wt% carbon and/or between 0.8 and 5.5 wt% aluminum metal chips.
15. Process according to claim 13, which includes, after step d), a calcination step in an oxidizing atmosphere at a temperature above 1250°C.
16. Process according to claim 15, wherein the calcination temperature is above 1350°C.
17. Process according to claim 15, wherein the calcination temperature is above 1400°C.
18. Process according to claim 15, wherein the calcination temperature is maintained for a time of at least 5 minutes.
19. Process according to claim 13, which includes a final step of screening the ground grains and selecting the screened grains.
20. Process according to claim 19, wherein said selected grains have a grit number of F50 or less according to the FEPA Standard 42-GB-1984.
21. ~~Use of~~ An abrasive product comprising the grains according to claim 1 ~~any of claims 1 to 12 and/or of the grains obtained by means of the process according to any of claims 13 to 20 in abrasive products.~~
22. ~~Use of the grains according to claim 21, wherein said~~ The abrasive product[[s]] of claim 21, wherein the abrasive product is a ~~are bonded products or coated products.~~